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**Drinker Biddle & Reath****FACSIMILE INFORMATION SHEET**

TO: Ms. Wanda Banks - USPTO FROM: Lori Aichele EXT.: 3385  
DATE: 9/12/02 DOCUMENT NAME: 6056-279 (35926-147277)  
NUMBER OF PAGES: (INCLUDING COVER): 17  
TELEPHONE NUMBER: \_\_\_\_\_ FAX NUMBER: (703) 305-2919

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ENTIRETY, PLEASE CALL THE SENDER AT THE EXTENSION LISTED ABOVE.

**DB&R FACSIMILE MACHINES**

215-988-2757

**MESSAGE:**

Pursuant to our telephone conversation earlier today, attached is a copy of the  
response filed May 30, 2002.

☒ Original will not follow☐ Original will follow via: ☐ Regular Mail ☐ Overnight Delivery ☐ Hand Delivery ☐ Other \_\_\_\_\_

The pages which follow are confidential and/or privileged. They are intended solely for the person to whom this cover sheet is addressed. Any review, reproduction or retransmission of such material by any person other than such addressee is unauthorized. If this cover sheet and the pages which follow have been received at your location in error, please notify the operator by telephone (collect) at the number set forth above and return the material by U.S. First Class Mail without inspection. We will reimburse your postage. Thank you for your cooperation.

## PATENT

Attorney Docket No.: 6056-279

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Patent application of  
Clara Fronticelli

Serial No.: 09/787,216  
I.A. No.: PCT/US99/22756

Filed:  
I.A. Date: September 30, 1999

For: Polymeric Hemoglobins Mutants

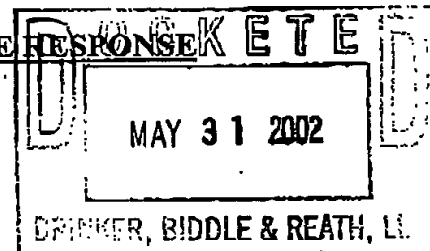
Group Art Unit:

Examiner:

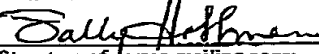
RESPONSE TO NOTIFICATION OF DEFECTIVE RESPONSE

Commissioner for Patents  
Box PCT  
Washington, D.C. 20231

Sir:



This is in response to the Notification of Defective Response mailed May 20, 2002 (copy enclosed), regarding the response to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures dated May 8, 2001.

CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.10	
EXPRESS MAIL Mailing Label Number:	ET324713790US
Date of Deposit:	5/30/02
I hereby certify that this correspondence, along with any paper referred to as being attached or enclosed, and/or fee, is being deposited with the United States Postal Service, "EXPRESS MAIL-POST OFFICE TO ADDRESSEE" service under 37 CFR 1.10, on the date indicated above, and addressed to: Commissioner for Patents, Washington, D.C. 20231.	
	
Signature of person mailing page:	
Sally Hoffman	
Type or print name of person	

Kindly amend the above-identified patent application, without prejudice, as follows:

Remarks

A substitute paper copy of the Sequence Listing is enclosed herewith. The Sequence Listing substitute paper is identical to the paper copy of the Sequence Listing filed with the response to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures, filed June 7, 2001. The data, originally presented in international application PCT/US99/22756 using PatentIn version 2.0, is now presented herewith using a different program, namely, FastSeq for Windows version 4.0. A substitute computer readable form (CFR) copy of the Sequence Listing is also submitted herewith.

No matter is added. A Statement pursuant to 37 CFR § 1.825 is submitted herewith.

No fee is believed to be required. However if a fee is due, kindly charge deposit account number 50-0573.

Respectfully submitted,

CLARA FRONTICELLI

BY 

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UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents, Box PCT  
United States Patent and Trademark Office  
Washington, D.C. 20231  
www.uspto.gov

U.S. APPLICATION NUMBER NO. 09/187,216	FIRST NAMED APPLICANT Clara Fronticelli	ATTY. DOCKET NO. 6056-279
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INTERNATIONAL APPLICATION NO. PCT/US99/22756
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LA. FILING DATE 09/30/1999	PRIORITY DATE 10/01/1998
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23973  
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CONFIRMATION NO. 7591

371 FORMALITIES LETTER

  
\*OC000000008153148\*

Date Mailed: 05/20/2002

## NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- U.S. Basic National Fee
- Indication of Small Entity Status
- Priority Document
- Biochemical Sequence Diskette
- Biochemical Sequence Listing
- Copy of IPE Report
- Copy of the International Application
- Copy of the International Search Report
- Information Disclosure Statements
- Oath or Declaration
- Preliminary Amendments
- Request for Immediate Examination
- Small Entity Statement

DOCKETED MAY 29 2002 DRINKER, BIDDLE & REATH, LLP	RECEIVED MAY 28 2002 DRINKER, BIDDLE & REATH, LLP
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The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

Applicant is required to complete the response within a time limit of **ONE MONTH** from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

The following items **MUST** be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):

- The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
- Please review the attached CRF problem report.
- **APPLICANT MUST PROVIDE:**

- An initial or substitute computer readable form (CRF) of the "Sequence Listing."
- An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.

- For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (703) 308-4216
- To Purchase Patent Software, call (703) 306-2600
- For Patent Software Program Help, call (703) 306-4119 or e-mail at [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or [patin3help@uspto.gov](mailto:patin3help@uspto.gov)

- The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

CHARITTA A BURT

Telephone: (703) 305-3734

**PART 1 - ATTORNEY/APPLICANT COPY**

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
09/787,216	PCT/US99/22756	6056-279

FORM PCT/DO/EO/916 (371 Formalities Notice)

09-07-3-16

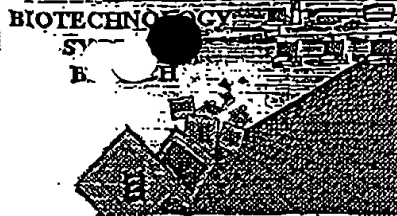
Does Not Comply  
Corrected Diskette Needed

abst.txt

# POLYMERIC HEMOGLOBIN MUTANTS

## Abstract of the Disclosure

Human  $\alpha$ -globin mutant polypeptides comprise the amino acid sequence of normal human  $\alpha$ -globin modified by (i) the substitution or deletion of Cys at positions 93 and 112, and (ii) the substitution of a Cys for a non-Cys amino acid at one other position in the polypeptide, preferably Ser at position 9. Modified human hemoglobins containing this or other  $\alpha$ -globin mutations, and/or an  $\beta$ -globin mutation, are provided, as well as polymers of such modified hemoglobins. Nucleic acids, vectors and transformed host cells for producing the  $\alpha$ -globin mutants are provided.



Re-run PCT 09

## CRF Problem Report

The Scientific and Technical Information Center (STIC) experienced a problem when processing the following computer readable form (CRF):

Application Serial Number: 09/787,216

Filing Date: 3-14-01

Date Processed by STIC: 3-28-01

STIC Contact: Mark Spencer, 703-308-4212

### Nature of Problem:

The CRF (was):

- ☐ (circle one) Damaged or Unreadable (for Unreadable, see attached)
- ☐ Blank (no files on CRF) (see attached)
- ☐ Empty file (filename present, but no bytes in file) (see attached)
- ☐ Virus-infected. Virus name: \_\_\_\_\_ The STIC will not process the CRF.
- ☐ Not saved in ASCII text
- ☐ Sequence Listing was embedded in the file. According to Sequence Rules, submitted file should only be the Sequence Listing.
- ☒ Did not contain a Sequence Listing. (see attached sample)
- ☐ Other: \_\_\_\_\_

**PLEASE USE THE CHECKER VERSION 3.0 PROGRAM TO REDUCE ERRORS.  
SEE BELOW FOR DETAILS:**

### **Checker Version 3.0**

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:  
<http://www.uspto.gov/web/offices/pac/checker>